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ABSTRACT

In this paper, it is suggested that reading instruction can be improved by studying the interactions of students and teachers in beginning reading classes. Such research could identify effective environments for learning to read, providing teachers with alternative and effective ways of adapting reading instruction to the students' needs. The paper reports several observational studies, and discusses their implications for reading instruction. Discussion following presentation of the paper is included. (RL)

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Learning to Read in Classroom Interaction

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In the second of these volumes, Sh[redacted]on White wrote that a new way to bring research and practice together was for researchers to take a walk, a walk out of their laboratories and offices and into school classrooms. He spoke about the new problems that such walks produce. But they also bring some new information, information that I think has been underpresented at these conferences: information on what is actually happening in classrooms where children are or are not learning to read.

The volumes include chapters about the micro level of eye movements, hemisphere dominance and information processing. There is at least one chapter at the macro level of statistical surveys. And in between there are chapters on specific curriculum materials. But, except for Marie Clay's chapter in the second volume, there is very little about what goes on in classrooms where teachers and children come together around the materials and behave in ways that get counted and statistically analyzed in reading research.

So, I will use my discussant role to fill this gap, and report some observational research by myself and others on learning to read in classroom interaction. Trebasso mentioned at this conference that speech act theories have become fashionable in linguistics. It's also the case that observational research is again fashionable in psychology. When you put the two together, you get the relatively recent sociolinguistic and/or ethnographic research in classroom settings. Not much of this research to date has focused on reading, but it easily could. Reading, after all,

is itself a language performance, even an oral performance in the beginning school years. That performance and the interactions in which it is embedded--between teacher and child or among children--can easily be monitored by audio or video tape. My hope is that from such research we will learn something about effective environments for learning to read, and also that reading will be a productive point of intersection between sociolinguistic analyses of how language is used interpersonally and cognitive psychological analyses of what people do with language in their heads. We're a long way from understanding that relationship now. We don't even have many theoretically-based hypotheses that could shift observational research from a bottom-up to a more top-down of enterprise. But we do know that at least for some cognitive tasks, such relationships to the language environment do exist. Perhaps the clearest example is the effect of immersion in an environment where a language is spoken that one once knew but had thought totally forgotten for five, ten or even twenty years. Somehow, one's memory of knowledge of that language, or access to it, is changed dramatically within hours of getting off the plane.

I know of no indication that ability to read can be increased that much by shifts from one environment to another. But we do have studies that point up some of the environmental influences on that more prosaic but important variable of time engaged in reading tasks. Two by Hess and Takanishi (1974) and Cazden (1973) are more traditional studies in which observers did on-the-spot coding. Two by Piestrup (1973) and McDermott (1976, 1977) are sociolinguistic and ethnographic analyses of audio- or video-taped segments of verbal and non-verbal behaviors. Gumperz and Herasimchuk (1973) give a comparative sociolinguistic analysis of a second grade child giving a

first grader reading lesson and a teacher conducting a spelling lesson with a group of second graders. But since their intent is not to compare effectiveness on any criteria, that study will not be further described here.

Hess and Takanishi observed student "engagement" in eight 30-minute observations in 39 elementary school classrooms in low-income communities to find out what teachers did to "turn on" their students to academic work in mathematics and language arts. Overall, they found that student engagement was strongly and consistently related to teacher behavior, but not to classroom architecture, nor to student characteristics such as sex and ethnicity. Two demonstrations of intra-teacher consistency in their data are impressive. First, two teachers were observed during two consecutive years. Although they had completely different classes and reported that they felt large differences between the two years, the mean level of engagement in their classes remained almost identical. Second, during the second year of the study, an entire school being observed moved from a self-contained classroom building to one with open-space architecture. The overall level of engagement across these very different physical environments was identical (82 and 83%), and the rank order of teachers in terms of percent engagement in their classrooms was .85.

Contrary to expectations, Hess and Takanishi found that these levels of student engagement were not consistently related across teachers to "specific teacher strategies" such as the frequency of specific questions or of feedback; instead they were strongly related to more "global instructional strategies" such as instructional group size (more engagement in small groups), and direction of student attention (more engagement when directed toward the teacher than toward other students or materials alone).

The authors conclude with a recommendation that teacher-training programs concentrate on skills in classroom social organization rather than on more specific teaching behaviors. This is an important caution for competency-based training as it is usually conceptualized.

Several years ago, at the request of Children's Television Workshop, I conducted an observational study that also measured children's engagement--or attention as we called it. We wanted to find out what environmental variables affected the viewing behavior of children watching The Electric Company in their elementary school classrooms. Viewing behavior was defined as both visual attention and verbalizations. We observed 10 primary grade classrooms during the 30-minute show five or six times each. Two independent measures of attention were used: a scan of the entire class at 30-second intervals to count those visually oriented toward the TV screens, and continuous monitoring and recording of the visual attention of individual students on an event-recorder. Monitoring individual attention on the event-recorder was extremely reliable (.94 inter-observer agreement), and group attention averages from the 30-second scans had high validity (average within classroom correlation of .94 between measures of group and individual attention). Coding verbalizations was more difficult (interobserver reliability attained only .84). The 10 classrooms were selected to represent a range in classroom "structure", defined here as a continuum from classrooms where attention to the show was expected and enforced by the teacher ("high" structure) to classrooms where a range of competing activities was available ("low" structure). As expected, we found that classroom structure was positively related to both group attention (correlation .87) and individual attention (correlation .95).

High structure affected all children, increasing their attentiveness and responsiveness to The Electric Company, so that poor readers in high structure classrooms had higher attention scores than better readers in low structure classrooms.

With the exception of one classroom, structure also correlated highly with average number of reading responses (correlation of .90 for nine classes, but only .38 for all ten). In the one exception, the most highly structured classroom was highest in amount of attention paid by the students but lowest in average number of reading responses. Since there was nothing in the level of reading ability in the classroom that would explain this anomaly, we think that some aspect of this teacher's classroom control (which we could not understand from our limited observations) discouraged overt reading responses.

Because The Electric Company is designed especially for children reading below grade level, we were also interested in the relationship between viewing behavior and reading level. Children's reading ability can be categorized according to their relative standing in their class (high, middle or low reading group) or ranked more absolutely according to standardized test scores. Average attention of children in the lowest quartile of achievement test scores was 79.7%. While this was not as high as the 89.4% and 85.8% attention of the two middle quartiles (25-75 percentiles), it was higher than the 69.8% attention of the best readers and was encouraging evidence that the show was reaching its intended audience. More interesting and surprising was a finding that, without exception, children of the same tested reading level showed less attention and more fluctuations in their attention (more distractions) when they are among the lowest readers in their classroom than when they are in relatively higher reading groups. In the following tables (Cazden, 1973, p. 37), this data is shown for the six second grade classrooms for which fall standardized test scores were available.

Attention and Fluctuation of Children in Six Second Grades by Standardized Test Quartiles (Comprehension) and Relative Standing in Class

Percent Attention

		Comprehension Quartiles			
		1-25%	26-50%	51-75%	76-100%
Standing within Class	high	n = 0	89.5 n = 10	90.9 n = 9	73.2 n = 11
	low	79.1 n = 20	79.0 n = 4	87.3 n = 2	49.4 n = 5

Number of Fluctuations

		Comprehension Quartiles			
Standing within Class	high		51.2	30.6	44.4
	low	50.6	58.6	57.5	64.6

Because our sample was not designed for matching numbers of children in each of these cells, firm conclusions cannot be drawn. But in these admittedly limited data, lower relative standing in class (in terms of reading group assignments) adversely affects children's attention to televised reading material. Seen in this way, a variable such as reading level, that is usually considered a child variable in its absolute sense, becomes an environmental variable as well through the child's relative standing in the classroom group. This phenomenon deserves further research.

Piestrup's research on sources of interference between the language of Black children and their teachers was referred to in Simons' chapter. In an analysis of 104 reading instruction episodes audiotaped in 14 first grade classrooms with predominantly Black children, Piestrup identified

two kinds of interference which she labelled structural and functional. Whether the mismatch is only a temporary misunderstanding or a more serious barrier depends on the teacher's understanding of the problem and her response to it. In the following episode about a workbook lesson, the teacher explicitly and effectively dealt with a structural (dialect) conflict:

T '...how would you harm the colt?'

C_1 Tear it.

T Huh?

C_1 Tear it.

T Th--th--Oh! Do you, do you know what a colt is, now?

C_1 Oh, kill it, kill it!

T No, what's a colt?

C_1 Somethin' you wear.

T There's an 'l' in it. "Coat" is c-o-a-ah--don't laugh, that's all right. "Colt" is very hard for city children, because they haven't been out on the farm, and they don't know about it. It's a baby, a baby colt.

C_3 A baby colt.

C_1 Oh yeah!

T Remember the story? an' it's a c-o-l-t. "Coat" is c-o-a-t, and it's no 'l' in it, but listen to--Keisha--colt, colt, colt. Now, do you know what a colt is?

C_4 Yeah, I know.

T What is it?

C_2 A baby horse.

T Yes, uh-huh, how could you harm a baby horse?

(Piestrup, 1973, pp. 3-5)

Interference is termed functional rather than structural when the mismatch comes from the functions language is used for rather than from

structural features of the language itself. In the following excerpt from oral reading, the children shift away from discussion of remote content to verbal play; the teacher is ignored and fails to get their attention back to the reading task:

T 'Off'

C_1 'Off to the--

T OK. It says 'wood.'

C_1 -- wood.'

T We would say woods--this book was written in England.

C_1 Now, I'm through. I ain't gonna read this page again.

T OK. Well, we're gonna turn the page and we're just gonna read the next page.

C_1 Uh uh! Darren 'sposed to be first.

T Well, I'm waiting for Darren to come back. Come on, Darren.

C_2 He just playin' aroun'_____ (not clear).

C_1 He crack his knuckles, in the buckles.

C_3 Uh-uh.

T OK, Zip and Wendy ran to the woods, and here's the--

C_1 I got a tow truck. My mama bought me one.

T -- father.

C_1 An' I got me a car to hook it on. It got a hook--

(Piestrup, 1973, pp. 6-7)

The two teachers out of the group of fourteen who were able to accomodate most effectively to both structural and functional sources of interference, termed "Black Artful" by Piestrup, had teaching episodes that were both lively and focused on reading, and their children had the

highest reading scores at the end of first grade. Piestrup's conclusion that "the ways teachers communicate in the classroom are crucial to children's success in learning to read" (p. 170) is worthy of more extended sociolinguistic research.

McDermott (1976; 1977) has done an intensive microanalysis, frame by frame, of video-tapes of two 30-minute reading groups (top group and bottom group) in one first grade classroom. During those 30-minutes around the reading table, children in the top group spend three times as much time on task as children in the bottom group, and McDermott has tried to understand how this happens. First, the procedure for allocating turns to read is different in the two groups. In the top group, the number of pages in the story is allocated equally among the children, and each child reads his share in order around the table. In the bottom group, there's no fixed order and each turn is negotiated according to who requests a turn and who the teacher thinks can read the page in question. Interruptions are more frequent in the bottom group (40 vs. 2 for the top group) and more disruptive because continuation of reading is more dependent on the teacher for assigning the next turn. Some of these interruptions are even initiated by the teacher herself:

> On one occasion, for example, she organizes the children to call for a turn to read their new books, "Raise your hands if you can read page 4." The children straighten themselves up in their chairs, form neat lines along the sides of the reading table, and either raise their hands for a turn or at least look at their books or the teacher. As their hands reach their highest point, the teacher looks away from the reading group to the back of the room. She yells at one child in the top group, and then another child in the top group. The three children in the bottom group who raised their hands, lower them to the table. Another little boy who didn't have his hand raised thrusts his chair back away from the reading table and the teacher

> and balances it on its two back legs. The other two children in the group simply look down at their books. The teacher returns and says, "nobody can read page 4? Why not?" Eventually the children recover, and someone gets a turn. But it all takes time.
>
> (McDermott, 1977, pp. 25-6)

How does this contrast come about? Possibly the teacher has been told somewhere that calling on children in a random order helps keep the attention of potentially more disorderly children (as recommended, for example, in the program analyzed by Bartlett). More importantly, McDermott suggests:

> What is driving this whole system? I don't think it is the negative expectations of the teacher. Rather, the children in the bottom group represent pedagogical and interactional problems for the teacher. Pedagogically, there is no doubt that it is easier for the teacher to practice reading with the children in the top group than to struggle with the process of teaching decoding to the children in the bottom group. And interactionally, there is the pressure of the competition between the groups and the scarred identities of the children in the bottom group. Even within the bottom group we hear claims of one child against another. ("Oh, you can't read". "Better than you.") Or we can point to a child in the bottom group who constantly calls for turns to read while, at the same time, appears to struggle to make sure that she does not get eye contact with the teacher.
>
> In response to all these problems, the teacher and the children in the bottom group make adaptations. In response to all these pressures they struggle to solve the pedagogical and interactional problems of coming to school not knowing how to read, of having a teacher who expects them to know how to read, of having a teacher who doesn't know how to overcome that they do not know how to read while she has twenty other children walking around the room, and of overcoming the pressure of having the other children taunt them for their performances. In response to all this, they make very specific adaptations. One adaptation is to make sure that no one child is isolated to read something too difficult. So the teacher uses the two different turn taking systems with the different groups, and this adaptation has the consequences already explicated.
>
> (McDermott, 1977, pp. 27-28)

McDermott concludes:

> Success in learning is best predicted by the time a child spends on a task; some may learn faster than others, but with time, almost any child can learn what has to be learned in school, if there are the proper organizational constraints for getting the child on task for the necessary amount of time. The question of why some children achieve more than others has been transformed into a question about the environments in terms of which some children get consistently organized to attend to school tasks in classrooms while others do not...
>
> Certain children, who, for whatever reasons come to school behind their peers in the development of classroom skills, constitute both pedagogical and interactional problems for most teachers. Most teachers say of them that they are harder to teach; part of that reaction is that they need more of the teacher's time if they are to catch up with their peers. In addition, they must learn under the pressure of knowing that they are behind, generally in a classroom which allocates status in part on the basis of the children's intellectual ranking in the classroom...
>
> Thus, the small differences between children in the early years of school expand quickly to the drastic forms of differential performance which become obvious in later years. At the root of these differences is not so much the extreme complexity of the school tasks, nor the differences in the learning potentials of the different children, but the differential environments we offer the children for getting organized and on task so that learning can take place.
>
> (McDermott, 1977, pp. 11-12)

I think we have to acknowledge that what McDermott has exposed would be found elsewhere if we dared to take as close a look.

Time on task is a powerful variable, but it is not the only one. One more qualitative variable is where the attention of children and teacher is focused. The simplest contrast here is decoding skills vs. meaning. We know we can not tell what actually happens from the manuals

on a teacher's desk or the methods she professes to use. For example, in one of the first-grade reading studies supported by the Office of Education Cooperative Research Project, Chall and Feldman (1966) went behind "method A vs. method B" comparisons to examine what teachers actually did to implement those methods. Observational studies of teachers showed no significant relationship between the ranking of the teacher's professed method emphasis (whether "sound-symbol" or "meaning") and the method emphasis observed in her classroom (p. 573). Popp made a similar point in her contrastive analysis of curriculum materials.

McDermott's research suggests that the focus may vary from one group in a classroom to another. In his top group, the children could read the words.

> Occasionally, the children create problems by word calling instead of reading for meaning, and the teacher's main pedagogical task is to convince the children that there is living language complete with propositions with illocutionary force on the page. Thus, one child reads, "But Ricky said his mother..." in a dull monotone, and the teacher corrects her, "Let's read it this way, 'But Ricky, said his mother'".
>
> With the bottom group, the teacher has rather different problems. Accordingly, the teacher and the children constitute rather different environments for each other in the different groups. The children in the bottom group do not read as well as the children in the top group, and the teacher attends less to the language on the book's pages and more to the phonics skills needed to interpret any given word in the text. Thus, there are many more stopping places in the children's reading, and the story line which is to hold the lesson together is seldom alluded to and never developed.
>
> (McDermott, 1977, pp. 22-3)

These alternative foci of attention--story line or phonic skills--may also be distributed throughout different parts of the school day. As

part of a larger study of children's functional language competence in kindergarten and the primary grades being conducted at the Center for Applied Linguistics, Griffin (1976) has isolated a set of reading event contexts which differ in the kinds of interaction that take place. She presented a pilot analysis of two events in one first-grade classroom: the traditional reading group and the teacher reading a story to the entire class. In the latter, teacher questions are all "comprehension" questions, in this case primarily of anticipated meaning: "What do you think will happen then?" In the reading group, by contrast, teacher comments and questions are about decoding, about units no larger than a word. Evidently this pattern is so pervasive that definite expectations about appropriate responses have been learned by the children. When the teacher at one point shifts and asks about meaning in the reading group, the child responding gives an incorrect decoding-type answer. At least in this first grade classroom, there is a division of teacher attention and, therefore, of child attention as well, such that decoding and comprehension are taught in entirely separate contexts.

At first thought, such a separation may seem detrimental to learning. Intuitively, it seems harder for children to get decoding and comprehending together in a single mental act if they are taught separately in different parts of the school day. On the other hand, maybe a clear and consistent focus of attention is helpful, especially for beginning learners. A student paper (Dickinson et al, 1977) raised this question in a new way.

Dickinson et al described differences in single vs. multiple foci, and attendant differences in time spent off-task in a math lesson and a reading group lesson with first-grade children in a single K-1 classroom.

In the math lesson, the children were individually manipulating attribute blocks into intersecting sets. There was a repeated and, therefore, predictable sequence of teacher directives about placement of the blocks, questions to the children about what they had done, and finally a concluding statement about what they had found out. In successive sequences, the two parts of each directive (e.g. "Place the blue blocks in this circle" and "Place the yellow blocks in this circle.") were spoken with decreasing intervening time, and successive questions to the children elicited progressively more information. In the reading group, in contrast, there was more variation and less predictability in both the focus of attention and the interactional structure. The teacher asked individual children to take turns reading aloud, but talk about the book title, table of contents, page numbers, and capital vs. lower case letters was interspersed in seemingly unpatterned ways.

There were so many other differences between the two groups that no firm conclusions can be drawn--differences in activity, group size and whether the group included all children present or only a subset. While the reading group was smaller, it did not include all the children in the room at the time, and so was more subject to interruptions and divided teacher attention. It would take more controlled research to determine how much the interactional simplification of the math group alone contributed to the greater on-task engagement.

The possible instructional value of such interactional simplification is not a new idea. Some of the success of Distar (described in Bartlett's chapter) may be due to this feature. Recently, such simplification has been advocated anew in a discussion of the design of Sesame Street

(Gibbon, Palmer & Fowles, 1975). A familiar example of holding the instructional frame constant while varying the content is the Sesame Street categorization game, "One of these things is not like the other." Gibbon et al explain the reason for this design:

> Varying the content while keeping the format constant promotes familiarity with format conventions that are potentially useful for instructional purposes. The format of any program segment functions as a kind of "frame" for the instructional content, a complex of auditory and visual conventions that the child can master through repeated exposure. For example, the viewer can learn to expect that a particular format will usually deal with a particular category of stimulus (letter, word number, concept) and with a particular intellectual activity (memorizing, sorting or classifying, guessing, combining). A particular sequence of events or types of events will reliably occur; a particular type of feedback to the viewer's implicit or explicit responses will be delivered. Moreover, a viewer's familiarity with a given format can help him determine at what point in the presentation the important information will come, how much of it there will be, perhaps even whether it is likely to be too easy, too difficult, or about right for him. Among the main instructional advantages afforded by these various forms of cueing is that they will entice the viewing child to attend to what is new in each succeeding application of the format, since it will "stand out" against the familiar background more than if the entire presentation were novel. As a result, learning and concept formation are enhanced.
>
> (Gibbon, Palmer & Fowles, 1975, pp. 225-6)

Reading groups as traditionally enacted in primary school classrooms are inherently complex in content and interactional structure. Learning to read requires many different kinds of learnings about the nested levels of organization of a written text--letter-sound correspondences, unusual word order, punctuation, layout on a page and in chapters, etc. We need interactional analyses of alternative organizations of reading events in which these learnings can be separated or combined.

References

Cazden, C.B. Watching children watch "The Electric Company": An observational study in ten classrooms. Final report to Children's Television Workshop, August, 1973 (Submitted to ERIC).

*

Dickinson, D., Kozak, N., Nelson, E. & Epstein, M. Examination of differences in the dynamics of small and large group instruction. Unpublished term paper, Harvard Graduate School of Education, 1977.

Gibbon, S.Y. Jr., Palmer, E.L., & Fowles, B.R. Sesame Street, The Electric Company and reading. In J.B. Carroll & J.S. Chall (Eds.). Toward a literate society, New York: McGraw-Hill, 1975, pp. 215-256.

Griffin, P. Presentation at symposium on "Studies of the social organization of the classroom", American Educational Research Association, San Francisco, April 21, 1976.

Gumperz, J.J. & Herasimchuk, E. The conversational analysis of social meaning: A study of classroom interaction. In R.W. Shuy (Ed). Sociolinguistics: Current trends and prospects. 23rd Annual Round Table. Washington, D.C.: Gerogetown University Press, 1973, pp. 99-134.

Hess, R.D. & Takanishi, R. The relationship of teacher behavior and school characteristics to student engagement. Technical Report No. 42, Stanford, California: Stanford Center for Research and Development in Teaching, 1974.

McDermott, R.P. Kids make sense: An ethnographic account of the interactional management of success and failure in one first-grade classroom. Unpublished doctoral dissertation, Stanford University, 1976.

McDermott, R.P. Pirandello in the classroom: On the possibility of equal educational opportunity in American culture. Paper presented to a conference on Issues Relating to the Future of Special Education, University of Minnesota, April, 1977.

Piestrup, A.M. Black Dialect Interference and Accomodation of Reading Instruction in First Grade. Monographs of the Language-Behavior Research Laboratory, Number 4, Univ. of Calif., Berkeley, 1973.

*Chall, J. & Feldman, S. A study in depth of first grade reading: An analysis of the interactions of proposed methods, teacher implementation and child background. Cooperative Research Project No. 2728, U.S. Office of Education, 1966.

OPEN DISCUSSION OF CAZDEN PRESENTATION

McCONKIE: The ethics of research these days almost precludes the use of something like an IRA survey to find the least effective classrooms. I am on the committee that reviews research proposals at Cornell, for human subjects, and if a proposal were to come before that committee said, "We are going to gather data on a bunch of classrooms, so that we can later identify who the effective and ineffective teachers are," that committee probably wouldn't approve the proposal unless it were made clear to the teachers, who were going to be in the study, that that was going to be the purpose of the study, and that they could choose not to participate in the study if they didn't want to. To have that kind of judgment made on them, even in a research context, without their knowledge, is becoming unethical in research. It's going to be harder and harder to do this kind of research.

CAZDEN: There must be some way around it, because I think the Far West Lab is doing something like this at the moment. I don't know the details.

McCONKIE: I suspect it's being done, but I also suspect it is going to be more and more difficult to do in the future.

GORDON: There is one way around that. I don't think those regulations affect administrative record keeping as much, and the careful monitoring of such records can produce much of the same kind of data.

WALLACH: I would like to ask Courtney why she seems to assume that all aspects of middle-class literacy supporting activities at home are equally important for

learning to read. We are not going to solve the problems of poor kids, minority group kids, not learning to read, through recreating in one fell swoop a middle-class home environment.

Isn't the crucial question to try to define key ingredients that are sufficient, and see if a program built in terms of such hypothesized key ingredients will do the job?

CAZDEN: I am sorry, God forbid that I should contribute to recreating the middle-class environment as a whole. The point was that I think good teachers do the same thing. The teachers who are teaching Scott Foresman and bootleg in phonics, are taking a program which focuses on context and meaning, and adding a component at another level. The teachers who do heavy phonics, and a lot of language and so on, are doing the same thing.

The point of the protocol was a fun way of showing that I think children in their natural environments, and in some schools, get material at different levels, that somehow gets put together. I just wanted to fight the sequential notion which I think is probably a straw man. I assume that you wouldn't only do phonemes for any week, or any month.

WALLACH: No, but I would do something that has to do with a certain sequence, which assumes a series of prerequisites from one subskill to another. What I worry about is that you are arguing for a genial eclecticism, and I think the whole field of reading has been blighted by it. The consequence in customary classroom situations is that an awful lot of kids, hundreds of thousands of first graders each year, don't get much of anything out of what they are taught.

CAZDEN: I love your program, and I love your community tutors, but not as a sole diet, and that's all. And I don't think we are arguing.

RESNICK: I think you are.

WALLACH: If you could make all teachers as competent and skillful and talented as the very best of them, that would be one route to solving the problem, but I don't believe that's going to happen within the foreseeable future.

And if one thinks in terms of what might practically be done for, say, kids who are around the 20th percentile of national norms on readiness tests at the beginning of school, and so on--

CAZDEN: But how thoroughly do you believe this sequence?

WALLACH: Oh, very thoroughly indeed. I think that phoneme identification skills are prerequisite to being able to make sense out of letter-phoneme relationships, if a teacher tries to teach any such sorts of correspondence rules. That's a very clear specification of a prerequisite to something else, and I think it's absolutely essential.

And then when you find that there are middle-class five-year-olds who, on the average, are very able to do this, while low-income six-year-olds are at sea regarding phoneme identification skills, you develop a very strong hunch that that has something to do with differential reading performance.

GORDON: This debate is proceeding along I think two tracks, that don't permit the two of you to meet.

You, Courtney, seem to be suggesting that we look at some of the naturally occurring phenomena, that are facilitative of learning, with a view to better understanding those processes. It seems what Mike is talking about is analyzing some aspects of learning to identify points at which one enters for the purpose of corrective intervention. I think both approaches are entirely legitimate. If I may use a medical model; if kids are generally eating well, we don't worry about supplementing them with Vitamins, but if we run across a child who has got some nutrition problems and if you are going to intervene to specifically correct or compensate, it is very important to determine which vitamin is missing.

I would certainly think that Mike's concern with the treatment is extremely important to kids who are not making it. You are concerned with facilitating the process, or even understanding what is facilitative of the process, to kids who are making it. So his concern with the sequence, for instance, might be less important for your kids and my kids, because maybe they deal with that naturally, but it may be a kid was stumbling over a particular problem in learning, because it was not being organized in that way for him, very much needs that attention be given to sequence.

SIMONS: If people are going to make very strong claims for sequence, I would like to see the strong evidence for it. And Courtney has made suggestions about different levels, but those aren't really strong claims. The other claims are quite strong and I just want to know where the evidence is for those strong claims.

CAZDEN: I still don't believe we are really arguing. I think I should have left Lea out of this, because I am not talking about that as a research strategy for finding out what to do with the kids that we care about. And I am not fighting

this kind of very focused instruction. But I am concerned that somebody will think that while you do that, you don't do anything else, and you don't deal with sentences until you get that point in the sequence. It may be a straw man. But I think there is a danger of another kind of deprivation of meaning in stories and so on, that I think can go along with your program. I really don't think I am fighting with you.

WALLACH: Except I suspect that your worry is not as worrisome as you think it is.

CAZDEN: Yes, I say maybe it is a straw man.

WALLACH: Let me give you an example from the kind of things we found.

People told us that children would be quickly bored with what we were asking them to do; that their attention would wander, they really wouldn't want to work at these kinds of rote tasks.

In fact, that's not at all the case. They work very hard. The existence of a close connection between what they are able to do and what they are asked to do is terribly crucial in terms of whether they have in their heads, at the time, what they need in order to respond positively to tasks that they are confronted with. And when they have enough of that in hand, they move quite naturally to the next step of starting to put it together into words, making contact with the oral language that's in their head already, and proceeding to meaning.

GUTHRIE: Your research strategy amounts largely to close observation in classrooms. I believe probably we have a trade-off situation between that kind

of work and, let us say survey work of a national level. The trade-off is that in observational work you have a lot of rich information that is very fruitful for generating hypotheses and models of interaction for theories. But I think it is difficult to test or refute hypotheses with that kind of observation, because often you lack power in terms of rejecting a hypothesis.

Now, I think when you have a larger number of observations over children and teachers, let us say, you have an increase in power to test hypotheses. But you decrease the richness of it all. I would say it's important to work both kinds of strategies. I think that one at the expense of the other just probably misses the point. We need hypothesis construction kind of strategies and hypothesis testing strategies, and they can be combined.

WILLIS: Because these kinds of large national studies tend to be the kind that informs public policy so frequently, it seems to me that the rigor is warranted. Is it possible to have groups of experimenters doing the same thing in different places in the country simultaneously, so that you have, in effect, a large national study based on a series of micro studies?

TRABASSO: Yes, I think I would like to see some coordination of the efforts, in order to avoid duplication of effort. Researchers tend to rely too much on the journals as sources of hypotheses, rather than the original problem itself, which seems to be in the classroom. I think there is a need for some reasonable coordination, some of which takes place in conferences like this. Another kind of coordination would be through organizations that already exist, or which are being created such as reading centers. I see the latter as very expensive.

I think the hope here is to return to the general problem, such as the type that Courtney suggested, namely taking a walk into the classroom, looking at classrooms' context, and looking at these observational studies for sources of ideas, so that you can keep the problem in front of you. Then I think you are more likely to direct you research towards that question, rather than sideline questions which arise from the journals per s..

Now, whether that can be attained by government direction or central agency direction or creation of a center, I don't know. But that certainly is a model which I think should be encouraged.

GORDON: I must comment on Harriet's call for rigor and on John's reminder that there isn't much power in observational work. Hearing both the comments reminded me of the speech that Donald Hebb made back in '73 at APA, when he repeated one of his favorite admonitions: "Anything not worth doing is not worth doing well."

And if we look at a lot of our large-scale studies, because we haven't done the generative work, that is, the careful examination of what the real world out there is like, we are frequently focused on the wrong issues. So the elegant collection of data with respect to effectiveness, and the elegant analysis of it, fall, I think, into Hebb's little category of stuff that is not worth doing, and it is therefore not worth doing well. So that, John, I would say there probably are at least two points at which the ethnographic work becomes important, one is at the generative level, but the other is at the level of interpretation of the validated work. After collecting empirical data to test a specific hypothesis, we sometimes find ambiguous relationships between variables. It may be that we can begin to make better sense of these quantitative data if we can look at them within a descriptive context of the situation in which they have been generated.

Such a contextual examination may better enable us to see what the trends in the data seem to be communicating. But to simply argue for validation or rigor, without appreciating the fact that validation and rigor have not told us much so far, I think would be a mistake.

CARROLL: At the risk of introducing an old chestnut, I might bring in a medical analogy; that is, the contrast between the researcher in a department of biology or chemistry in a medical school who is working on blood chemistry, and who does his laboratory research, and on the other hand the clinical person who goes into the hospital and finds out what kinds of disorders people have in their blood. It seems to me that the sort of thing that we should get out of some kinds of classroom observations, would be better notions of what kinds of things can go wrong; what kind of variables seem to be pertinent in a particular situation.

For example, this business about turn taking, and the amount of time that particular children spend on reading, and the factors that condition that, may make all of the difference, as a matter of fact, in many aspects of reading behavior.

And I think if there is a difficulty in doing research "ethically" that would stem from this notion that people don't want to be evaluated, there is something wrong there, because we are trying to improve instruction, are we not? And we are simply trying to find some variables that contribute to good and less good instruction.

So the kind of thing that Courtney is talking about does have some relevance to all of this.

Of course, there is also a kind of quasi-laboratory research that is done in classrooms, and I don't remember whether Courtney and I were at a conference on teaching, that was sponsored by NIE, in which a lot of very careful observations were taken in the classroom, to find out more about the effect of feedback and correction of behavior, different styles of doing this correction, and so on. So there are various kinds of classroom observation research.

HAMMOND: I am interested in focusing the issue on compensatory education. It is interesting to me that neither discussant has really discussed that topic in any direct way, although Mike Wallach may well be pushing us in that direction. It seems to me there may be some value in looking at what happens in middle-class families, and trying to figure out whether any of that is going to be useful in the classroom. But I would want to construct another kind of deficit theory, we have laid one to rest today already, namely a deficit theory of what happens in lower-class families. Surely kids who are compensatory education kids, who come from, let me call them, lower-class families, come with some strengths, some of those kids must come with some strengths. I haven't heard anybody talk about that in the last few days.

And then finally, on the issue of ethics, and of how difficult it may be to perform research, I wonder if we shouldn't be concerned in our research about the side effects, so to speak, of what we are doing. We talked some today about transfer, about whether we need to go through all 26 letters, or whether we can do five, and then assume that somehow the rest are going to fall into place. That's a kind of side effect in that in addition to teaching the kid about this letter, and then about that letter, there is a process that is being performed, there is something else that is going on, an implicit kind of a thing. There may be other kinds of side effects that come from a particular way of teaching kids.

We may be teaching kids to be more or less independent, for example, and maybe we need to look some more at some of those things, in addition to what impact we may be having on the kids' score on the Stanford Achievement Test, or some cognitive measure.

SUPPES: I have three comments. The first is to John Guthrie about power. I want to defend Courtney's classroom. Power, in the standard statistical sense, is always relative to the hypothesis. The data you presented are extremely weak in power, for many questions that one wants to ask about the reading process. So there is no absolute sense of power. Her classroom observations, if carefully calibrated, will have much more power than yours. For other questions, other types of hypothesis, your data will have the power. If you want to study certain kinds of questions, you have got to look at data from individuals in great depth. You are not going to do both things. So it is not an issue of power. I mean, I want to emphasize that your data don't have any more power, per so, than detailed and careful classroom observations.

The second observation, is to you Mike, because in my view I agree with Herb; you are too confident about the correctness of your view. I think you have done something that is extremely good, and I commend you for it. But when it comes to the defense of it, you are too imperialistic about the virtues of the particular way you have done things. You remind me of computer programmers, who have written a program that works well, and you ask them, "Is this the best you can do?" And they say, "Of course, look how wonderful it is." And they haven't even tackled the intellectual problem of establishing that it is the best that can be done.

That is a very much harder question. I am not saying you should have done it, but I must insist upon the point that you have not done it.

WALLACH: I certainly would not argue this is the best one can do.

SUPPES: Courtney gives you too much ground, I think. I won't give you as much ground as she gives you. I certainly agree with what you have done. But I would be willing to say that we need a lot more study before we can conclude firmly that the particular line of attack you take, careful sequencing in the way that you do it, is the best way.

I mean "best" in the large sense, I don't mean that I am nit-picking, that you should do it slightly differently here and a little bit differently there. I mean, is it conceptually clearly established that, let's say, the Scott Foresman way, done with similar care is necessarily going to be drastically worse.

WALLACH: Yes, this is exactly the comparison to Ellson I have been talking about.

SUPPES: I understand that comparison to Ellson. I haven't looked at Ellson's data in a while. But I don't think that establishes the fact conclusively. And I think it's a point worth insisting upon because, I think it's important not to let that position become entrenched, without the data so firm that they are unequivocal. That is not to detract from what you have done; it is to argue about the conclusiveness of the demonstration.

WALLACH: No one study, and no one comparison are going to establish anything conclusively. But meanwhile, while this scholarly processing is going on, I

think we should remember that there are hundreds of thousands of kids each year not learning to read in first grade. Most of them are low income kids, many of them are minority group members.

I think if one works through to a type of approach that is practical in the sense that it can be implemented, even though it may not be perfect, that it's something that ought to be used while these other kinds of questions are raised.

SUPPES: Now, that I agree with; we don't disagree about that. I really want to keep clearly on the table that the intellectual issues of the best way to proceed are still up for final resolution. Third and final point. I recently read something that for me was very useful about these contrasts that we continually discuss here of middle-class and lower-class family styles. It was a report of what university students were like at the University of Oxford in the 13th century. The description of the life at the university in the 13th century used England as a reference, because the story was about England. No classes in England have anything like the kind of behavior that was characteristic of university students in the 13th century, in terms of the violence of behavior, the lack of what we would in broad terms call middle-class culture.

And I think it's terribly important to recognize that though we can go on about these distinctions, historically the differences between classes and groups in our society are really very small compared to the historical differences between the best educated and the best off people now and, say, six or seven hundred years ago.

END SESSION